UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,211	12/16/2004	Carl L. Christensen	PU020299	5249

7590 02/16/2010

Joseph S Tripoli
Thomson Licensing Inc
PO Box 5312
Princeton, NJ 08543-5312

EXAMINER	
RUTKOWSKI, JEFFREY M	
ART UNIT	PAPER NUMBER
2473	

MAIL DATE	DELIVERY MODE
02/16/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/518,211	CHRISTENSEN ET AL.	
	Examiner	Art Unit	
	JEFFREY M. RUTKOWSKI	2473	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 November 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,5 and 7-11* is/are rejected.

7)☒ Claim(s) *3 and 6* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e) as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 60/390358, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. There is no disclosure of the claimed subject matter in the provisional application. Accordingly, **claims 1-11** are not entitled to the benefit of the provisional application. The **claims 1-11** have been given a priority date of 06/16/2003.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1 and 4** are rejected under 35 U.S.C. 102(e) as being anticipated by Byers et al. (US Pat 6,693,901), hereinafter referred to as Byers.

4. For **claim 1**, Byers discloses *a first routing engine having input and output sides* (control routing circuit **112** for circuit board **104a**, see figure 1)*; a second routing engine having input and output sides* (control routing circuit **112** for circuit board **104b**)*; a third routing engine having input and output sides* (control routing circuit **112** for circuit board **104c**)*; a first link, said first link coupling said input side of said first routing engine to said input side of said second routing engine* (item **106a**)*; a second link, said second link coupling said input side of said first routing engine to said input side of said third routing engine* (item **106b**)*; and a third link, said third link coupling said input side of said second routing engine to said input side of said third routing engine* (item **106d**)*; wherein said first, second and third routing engines are arranged in a fully connected topology* (figure 1 shows the control routing circuits **112** are fully interconnected). Byers' control routing circuits **112** anticipates a routing engine because the control routing circuits **112** are also used to control device communications (see col. 4 lines 5-26).

5. For **claim 4**, Byers discloses *a fourth routing engine having input and output sides* (control routing circuit **112** for circuit board **104d**, see figure 1)*; a fourth link, said fourth link coupling said input side of said first routing engine to said input side of said fourth routing engine* (item **106c**)*; a fifth link, said fifth link coupling said input side of said second routing engine to said input side of said fourth routing engine* (item **106e**)*; and a sixth link, said sixth*

link coupling said input side of said third routing engine to said input side of said fourth routing engine (item **106f**)*; wherein said first, second, third and fourth routing engines are arranged in a fully connected topology* (figure 1 shows the control routing circuits **112** are fully interconnected).

6. **Claims** 7 **and 10-11** are rejected under 35 U.S.C. 102(b) as being anticipated by Civanlar et al. (US Pat 6,078,963), hereinafter referred to as Civanlar.

7. For **claims** 7 **and 10**, Civanlar discloses a scenario where one of the router ports **103** is used to broadcast routing updates to the other routing ports **103** via the switching fabric **102** (see col. 7 lines 59-61). For this scenario, Civanlar discloses *at least three broadcast router components* (intelligent routing ports **103** B-D, see figure 1)*, each of said at least three broadcast router components is a discrete router having an input side* (side directly connected to the switching fabric **102**) *and an output side* (network interface **110**; the network interface **110** is used to forward the routing updates to neighboring devices, see col. 7 lines 61-64) *and including a routing engine coupled between said input and output sides* (each intelligent routing port **103** includes a routing engine **107**)*; and means for coupling said at least three broadcast router components* (switching fabric **102**) *on wherein said input side of each of said linear expandable broadcast router component is connected, by a discrete link, to each and every one of the other said input sides of said broadcast router components* (figure 1 shows the links in the switching fabric **102** fully interconnecting the intelligent routing ports **103** are discrete).

8. For **claim 11**, Civanlar implies that any one of the intelligent router ports **103** are capable of broadcasting routing updates via the switching fabric **102** (see col. 7 lines 42-65). Therefore, Civanlar discloses *providing a fourth router* (intelligent routing ports **103** A, see figure 1) *having*

input (side directly connected to the switching fabric **102**) *and output sides* (network interface **110**)*; coupling, using a fourth discrete link, said input side of said first router to said input side of said fourth router; coupling, using a fifth discrete link, said input side of said second router to said input side of said fourth router; and coupling, using a sixth discrete link, said input side of said third router to said input side of said fourth router* (figure 1 shows the links in the switching fabric **102** fully interconnecting the intelligent routing ports **103** are discrete).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. **Claims 2 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Byers in view of Choe (US Pg Pub 2002/0118682).

13. For **claim 2**, Byers discloses a control/routing circuit **112** that has a single input and multiple outputs (see figure 2). Byers does not disclose a routing engine that uses an NxM

architecture. Choe discloses *said first, second and third routing engines* (forwarding engines **112**, see figures 2 and 3) *each have N inputs to said input side thereof and M outputs from said output side thereof* (see paragraph 0049 figure 3)*; and said linearly expandable router formed from said first, second and third routing engines having 3N inputs and 3M outputs* (the forwarding engine **112** can have any number of inputs and outputs, see figure 3). Given that routing circuits and forwarding engines perform the same functions (see Choe paragraph 0011), it would have been obvious to a person of ordinary skill in the art at the time of the invention to use an NxM architecture in Byers' invention to take advantage of parallelism (Choe, paragraph 0048).

14. For **claim 5**, Byers discloses a control/routing circuit **112** that has a single input and multiple outputs (see figure 2). Byers does not disclose a routing engine that uses an NxM architecture. Choe discloses *said first, second, third and fourth routing engines* (forwarding engines **112**, see figures 2 and 3) *have N inputs to said input side and m outputs from said output side* (see paragraph 0049 figure 3)*; and said linearly expandable router formed from said first, second, third and fourth routing engines having 4N inputs and 4M outputs* (the forwarding engine **112** can have any number of inputs and outputs, see figure 3). Given that routing circuits and forwarding engines perform the same functions (see Choe paragraph 0011), it would have been obvious to a person of ordinary skill in the art at the time of the invention to use an NxM architecture in Byers' invention to take advantage of parallelism (Choe, paragraph 0048).

15. **Claims 8-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Civanlar in view of Lydon et al. (US Pat 6,680,939), hereinafter referred to as Lydon.

16. For **claim 8**, Civanlar do not disclose the use of NxM routing modules. Lydon discloses routing modules that have N inputs and M outputs **[col. 2 lines 64-67]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use NxM routing modules in Civanlar's invention to provide parallelism in the router.

17. For **claim 9**, Civanlar does not disclose a means for coupling N inputs. Lydon teaches the inputs of the four router modules are connected via bus **[col. 4 line 51]** (said coupling means further comprises means for coupling said N inputs for each one of said at least three broadcast router components to said routing engine for the other ones of said at least three broadcast router components). It would have been obvious to a person of ordinary skill in the art at the time of the invention to interconnect N modules via bus in Civanlar's invention to provide parallelism in the router.

Allowable Subject Matter

18. **Claims 3 and 6** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Terminal Disclaimer

19. The terminal disclaimer filed on 04/06/2009 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of Application Number 10/518212 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Response to Arguments

20. The argument with respect to Byers not disclosing the use of input or output sides because Byers discloses support for bi-directional traffic are not persuasive the claims do not require information to flow in any particular direction via the links.

21. The argument with respect to Byers not disclosing separate input and output sides are not persuasive. Since there is no recitation of how information flows in the links between the routing engines, the claims do not require separate input and output sides.

22. The argument with respect to Byers not disclosing the same data being available to a plurality of routing engines is not persuasive. Byers does imply the same information is available to a plurality of routing engines because the hub **110** is used to transmit information to one or more circuit boards via the fabric links **106a-f** (see col. 3 lines 60-65 and figures 1-2). Therefore, Byers implies that an output from circuit board **104d** would be input to circuit boards **104a-c** (see figure 1). In this scenario, three routing engines would receive the same information.

23. The argument with respect to Byers' architecture connecting an "output" of one router to the "input" of another router is not persuasive because the claims do not require information to flow over the links interconnecting the routing engines. The claim scope does not exclude the routing engines from receiving the same information via other links (**106,c,e,f**) as in Byers. The Examiner would agree that the claims would be distinguishable over Byers if the claims required information to flow in a particular manner through the router.

24. The argument with respect to Civanlar not disclosing the use of discrete links is not persuasive. Figure 1 of Civanlar shows that there are separate (discrete) connections in the switching fabric **102** that are used to interconnect the components of the router.

25. The arguments with respect to Civanlar not disclosing the use of input sides are not persuasive because the claims do not require information to flow in any particular direction via the links.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY M. RUTKOWSKI whose telephone number is (571)270-1215. The examiner can normally be reached on Monday - Friday 7:30-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey M Rutkowski/
Examiner, Art Unit 2473

/KWANG B. YAO/
Supervisory Patent Examiner, Art Unit 2473